

Applicants: Ehud Cohen, et al.

Serial No.: 10/722,589

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Page 3

AMENDMENTS TO THE SPECIFICATION

Kindly add the following new paragraphs immediately before the Detailed Description of Preferred Embodiments on p. ¹⁷ 15:

KS
11/18/10

Fig. 2 illustrates the construction and mode of operation of a tripolar electrode device particularly useful in the present invention;

Fig. 3 diagrammatically illustrates an array of tripolar electrode devices constructed in accordance with the present invention for selectively blocking the propagation through certain nerve-fibers of body-generated action potentials;

Fig. 4 is a block diagram illustrating the stimulator in the apparatus of Fig. 3;

Fig. 5 is a block diagram illustrating the operation of the apparatus of Figs. 3 and 4 for suppressing pain sensations;

Figs. 6A and 6B are block diagrams illustrating how the apparatus of Figs. 3 and 4 may also be used for suppressing selected muscular or glandular activities controlled by the motor nerves;

Figs. 7A and 7B are block diagrams illustrating how the apparatus of Figs. 3 and 4 may also be used for stimulating selected motor or glandular activities upon the failure of the body to generate the required action potentials; and

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Page 4

Figs. 8A and 8B are diagrams helpful in explaining the manner of calibrating the apparatus of Figs. 3 and 4.

Kindly add the following new paragraphs immediately before the paragraph on p. ²³ ~~21~~ beginning with "It is to be understood. . . .":

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According to another aspect of the present invention, there is provided a method of selectively suppressing the propagation of body-generated action potentials propagated in a predetermined direction at a first velocity through a first group of nerve fibers in a nerve bundle without unduly suppressing the propagation of body-generated action potentials propagated in the predetermined direction at a different velocity through a second group of nerve fibers in the nerve bundle, comprising: applying a plurality of electrode devices to, and spaced along the length of, the nerve bundle, each electrode device being capable of outputting, when actuated, unidirectional electrode-generated action potentials producing collision blocks with respect to the body-generated action potentials propagated through the second type of nerve fibers; and sequentially actuating the electrode devices with delays timed to the first velocity to produce a "green wave" of anodal blocks minimizing undesired blocking of the body-generated action potentials propagated through the first group of nerve fibers while maximizing the generation rate of said unidirectional electrode-generated action potentials producing collision blocks with respect to the body-generated action potentials propagated through said second type of nerve fibers.

Such a method may be used for producing collision blocks in sensory nerve fibers in order to suppress pain, and also in motor nerve fibers to suppress selected muscular or